In the Claims:

All of the currently pending claims are listed below including any amendments proposed herein. Please amend the claims as follows:

1. (Currently amended) At least one computer readable medium having computer program instructions stored therein for effecting multi-band processing of an original sampled signal, comprising:

first instructions for separating the original sampled signal into a plurality of signal components each corresponding to one of a plurality of frequency bands;

second instructions for independently and dynamically controlling a dynamic range associated with each one of the plurality of signal components, wherein controlling the dynamic range for each signal component includes dynamically adjusting a gain factor after applying the gain factor to a current sample of the signal component and in response to comparison of the current sample to a threshold level;

third instructions for modifying at least one signal level associated with the plurality of signal components; and

fourth instructions for combining the signal components into a processed sampled signal.

2. (Original) The at least one computer readable medium of claim 1 wherein the first instructions separate the original sampled signal into one of 3, 4, and 5 overlapping frequency bands.

3. (Currently amended) The at least one computer readable medium of claim 1 wherein the second instructions effect nonlinear control of a the gain factor associated with each of the signal components.

4. (Currently amended) The at least one computer readable medium of claim 1 wherein the second instructions control the dynamic range associated with each of the signal components by applying a the gain factor to each sample of each of the signal components~~, the gain factor being dynamically adjusted~~.

5. (Original) The at least one computer readable medium of claim 4 wherein the gain factor for each of the signal components is dynamically adjusted every first number of samples.

6. (Original) The at least one computer readable medium of claim 5 wherein the first number comprises 64.

7. (Cancelled)

8. (Currently amended) The at least one computer readable medium of claim ~~7~~ 1 wherein the gain factor is adjusted upward using a release rate parameter where ~~each~~ the current sample is below the threshold level, and downward using an attack rate parameter where ~~each~~ the current sample is above the threshold level.

9. (Original) The at least one computer readable medium of claim 1 wherein the third instructions limit the at least one signal level with reference to a first number of future samples.

10. (Currently amended) The at least one computer readable medium of claim 9 wherein a the gain factor to be applied to a the current sample is further modified with reference to at least one of the future samples.

11. (Original) The at least one computer readable medium of claim 10 wherein the gain factor is decreased when application of the gain factor to the at least one future sample results in the at least one future sample exceeding a threshold, and wherein the gain factor is decreased after the gain factor has been applied to the first number of current samples.

12. (Original) The at least one computer readable medium of claim 1 wherein the third instructions implement an independent negative attack time limiter for application to each of the plurality of signal components.

13. (Original) The at least one computer readable medium of claim 1 wherein the third instructions implement a negative attack time limiter for application to the processed sampled signal.

14. (Original) The at least one computer readable medium of claim 1 further comprising fifth instructions for applying at least one preset gain factor to at least one of the processed sampled signal and the plurality of signal components.

15. (Original) The at least one computer readable medium of claim 14 wherein the at least one preset gain factor comprises a plurality of preset gain factors, each preset gain factor corresponding to one of the plurality of signal components.

16. (Original) The at least one computer readable medium of claim 15 wherein multiple ones of the plurality of preset gain factors correspond to each of the plurality of signal components.

17. (Original) The at least one computer readable medium of claim 16 wherein a first one of the multiple ones of the plurality of preset gain factors for a corresponding one of the plurality of signal components is an inverse of second one of the multiple ones of the plurality of preset gain factors for the corresponding one of the plurality of signal components.

18. (Original) The at least one computer readable medium of claim 17 wherein the first and second preset gain factors are applied to the corresponding signal component before and after, respectively, processing of the corresponding signal components by either of the second and third instructions.

19. (Original) The at least one computer readable medium of claim 14 wherein the at least one preset gain factor comprises a first preset gain factor for applying to the processed sampled signal.

20. (Original) The at least one computer readable medium of claim 1 wherein the first instructions implement at least one two-way crossover for separating the original sampled signal into the plurality of signal components.

21. (Original) The at least one computer readable medium of claim 1 wherein the first instructions implement at least one three-way crossover for separating the original sampled signal into the plurality of signal components.

22. (Original) The at least one computer readable medium of claim 1 wherein the first instructions correspond to four two-way crossover blocks for separating the original sampled signal into five signal components each corresponding to one of five frequency bands, wherein the second instructions correspond to five automatic gain control (AGC) blocks for independently and dynamically controlling the dynamic range associated with each one of the signal components, wherein the third instructions correspond to five negative attack time limiter (NATL) blocks for limiting the signal level associated with each of the signal components, the at least one computer readable medium further comprising fifth instructions for applying a predetermined gain to each of the signal components prior to processing by corresponding ones of the NATL blocks, and sixth instructions for applying an inverse of the predetermined gain to each of the signal components after processing by corresponding ones of the NATL blocks.

23. (Original) The at least one computer readable medium of claim 1 wherein the first instructions correspond to two three-way crossover blocks for separating the original sampled signal into five signal components each corresponding to one of five frequency bands, wherein the second instructions correspond to five automatic gain control (AGC) blocks for independently and dynamically controlling the dynamic range associated with each one of the signal components, and wherein the third instructions correspond to five negative attack time limiter (NATL) blocks for limiting the signal level associated with each of the signal components.

24. (Original) The at least one computer readable medium of claim 1 wherein the first instructions correspond to a two-way crossover block and a three-way crossover block for separating the original sampled signal into four signal components each corresponding to one of

four frequency bands, wherein the second instructions correspond to four automatic gain control (AGC) blocks for independently and dynamically controlling the dynamic range associated with each one of the signal components, wherein the fourth instructions correspond to a mixing block for combining the signal components into a mixed sampled signal, and wherein the third instructions correspond to a negative attack time limiter (NATL) block for limiting a signal level associated with the mixed sampled signal.

25. (Original) A system for transmitting the processed sampled signal of claim 1 comprising the at least one computer readable medium of claim 1.

26. (Original) The system of claim 25 comprising a server platform in a wide area network.

27. (Original) The system of claim 25 comprising a digital radio transmission platform.

28. (Original) The system of claim 25 comprising a cellular communication system transmission platform.

29. (Original) The system of claim 25 comprising a cable television transmission platform.

30. (Original) The system of claim 25 comprising a satellite television transmission platform.

31. (Original) A system for receiving the original sampled signal of claim 1 comprising the at least one computer readable medium of claim 1.

32. (Original) The system of claim 31 comprising a client platform in a wide area network.

33. (Original) The system of claim 31 comprising a digital radio receiver.

34. (Original) The system of claim 31 comprising a portable cellular communication device.

35. (Original) The system of claim 31 comprising a cable television decoder.

36. (Original) The system of claim 31 comprising a satellite television decoder.

37. (Original) A portable device comprising the at least one computer readable medium of claim 1.

38. (Original) The portable device of claim 37 wherein the original sampled signal represents an audio signal and the portable device comprises a digital audio player.

39. (Original) The portable device of claim 38 wherein the digital audio player comprises a compact disc player.

40. (Original) The portable device of claim 38 wherein the digital audio player

comprises an MP3 player.

41. (Currently amended) A computer implemented method for effecting multi-band processing of an original sampled signal, comprising:

separating the original sampled signal into a plurality of signal components each corresponding to one of a plurality of frequency bands;

independently and dynamically controlling a dynamic range associated with each one of the plurality of signal components, wherein controlling the dynamic range for each signal component includes dynamically adjusting a gain factor after applying the gain factor to a current sample of the signal component and in response to comparison of the current sample to a threshold level;

limiting at least one signal level associated with the plurality of signal components; and

combining the signal components into a processed sampled signal.

42. (Original) The computer implemented method of claim 41 as implemented in a wide area network having a server platform from which the original sampled signal originates and a client platform.

43. (Original) The computer implemented method of claim 42 wherein the separating, controlling, limiting, and combining occur on the server platform.

44. (Original) The computer implemented method of claim 42 wherein the separating, controlling, limiting, and combining occur on the client platform.

45. (Original) The computer implemented method of claim 41 further comprising encoding the processed sampled signal into a compressed file format.

46. (Original) The computer implemented method of claim 45 wherein the compressed file format is MP3.

47. (Original) A method for providing data files which comprise encoded versions of processed files resulting from the multi-band processing of claim 41.

48. (Original) The method of claim 47 wherein providing the data files comprises transmitting the data files in a wide area network.

49. (Original) The method of claim 47 wherein providing the data files comprises providing at least one computer readable medium having the data files stored therein.

50. (Original) The method of claim 47 wherein providing the data files comprises transmitting the data files using a transmitter of electromagnetic waves.

51. (Original) A computer readable medium having a data file stored therein representing the processed sampled signal generated using the computer implemented method of claim 41.

52. (Currently amended) An apparatus for effecting multi-band processing of an original sampled signal, comprising:

means for separating the original sampled signal into a plurality of signal components each corresponding to one of a plurality of frequency bands;

means for independently and dynamically controlling a dynamic range associated with each one of the plurality of signal components, including means for dynamically adjusting a gain factor after applying the gain factor to a current sample of the signal component and in response to comparison of the current sample to a threshold level;

means for limiting at least one signal level associated with the plurality of signal components; and

means for combining the signal components into a processed sampled signal.

53. (Currently amended) A signal processor for effecting multi-band processing of an original sampled signal, comprising:

at least one first processing block for separating the original sampled signal into a plurality of signal components each corresponding to one of a plurality of frequency bands;

a plurality of second processing blocks for independently and dynamically controlling a dynamic range associated with each one of the plurality of signal components, wherein controlling the dynamic range for each signal component includes dynamically adjusting a gain factor after applying the gain factor to a current sample of the signal component and in response to comparison of the current sample to a threshold level;

at least one third processing block for limiting at least one signal level associated with the plurality of signal components; and

at least one fourth processing block for combining the signal components into a processed sampled signal.

54. (Currently amended) A signal processor for effecting multi-band processing of an original sampled signal, comprising:

four two-way crossover blocks for separating the original sampled signal into five signal components each corresponding to one of five frequency bands;

five automatic gain control (AGC) blocks for independently and dynamically controlling a dynamic range associated with each one of the signal components, wherein controlling the dynamic range for each signal component includes dynamically adjusting a gain factor after applying the gain factor to a current sample of the signal component and in response to comparison of the current sample to a threshold level;

five negative attack time limiter (NATL) blocks for limiting a signal level associated with each of the signal components;

five first drive blocks for applying a predetermined gain to each of the signal components prior to processing by corresponding ones of the NATL blocks;

five second drive blocks for applying an inverse of the predetermined gain to each of the signal components after processing by corresponding ones of the NATL blocks; and

a mixing block for combining the signal components into a processed sampled signal.

55. (Currently amended) A signal processor for effecting multi-band processing of an original sampled signal, comprising:

two three-way crossover blocks for separating the original sampled signal into five signal components each corresponding to one of five frequency bands;

five automatic gain control (AGC) blocks for independently and dynamically controlling a dynamic range associated with each one of the signal components, wherein controlling the dynamic range for each signal component includes dynamically adjusting a gain factor after

applying the gain factor to a current sample of the signal component and in response to comparison of the current sample to a threshold level;

five negative attack time limiter (NATL) blocks for limiting a signal level associated with each of the signal components; and

a mixing block for combining the signal components into a processed sampled signal.

56. (Currently amended) A signal processor for effecting multi-band processing of an original sampled signal, comprising:

a two-way crossover block and a three-way crossover block for separating the original sampled signal into four signal components each corresponding to one of four frequency bands;

four automatic gain control (AGC) blocks for independently and dynamically controlling a dynamic range associated with each one of the signal components, wherein controlling the dynamic range for each signal component includes dynamically adjusting a gain factor after applying the gain factor to a current sample of the signal component and in response to comparison of the current sample to a threshold level;

a mixing block for combining the signal components into a mixed sampled signal; and

a negative attack time limiter (NATL) block for limiting a signal level associated with the mixed sampled signal.

57. (Currently amended) A signal processor for effecting multi-band processing of an original sampled signal, comprising:

two two-way crossover blocks for separating the original sampled signal into three signal components each corresponding to one of three frequency bands;

three automatic gain control (AGC) blocks for independently and dynamically controlling a dynamic range associated with each one of the signal components, wherein controlling the

dynamic range for each signal component includes dynamically adjusting a gain factor after applying the gain factor to a current sample of the signal component and in response to comparison of the current sample to a threshold level;

three negative attack time limiter (NATL) blocks for limiting a signal level associated with each of the signal components;

three first drive blocks for applying a predetermined gain to each of the signal components prior to processing by corresponding ones of the NATL blocks;

three second drive blocks for applying an inverse of the predetermined gain to each of the signal components after processing by corresponding ones of the NATL blocks; and

a mixing block for combining the signal components into a processed sampled signal.

Please add the following new claim:

58. (New) The at least one computer-readable medium of claim 1 wherein the first instructions implement a plurality of cascaded low pass filters, each low pass filter receiving an input sample and generating a low pass output sample and a high pass output sample which corresponds to a difference between the input sample and the low pass output sample, each low pass filter except for a first low pass filter in the cascade receiving as the high pass output sample of a preceding stage as the input sample.